



Methodology

*Master European Structured Finance  
Surveillance Methodology*

JUNE 2011



*Insight beyond the rating.*

---

## CONTACT INFORMATION

### STRUCTURED FINANCE

**Claire J. Mezzanotte**

Managing Director  
Structured Finance - U.S. and European ABS/RMBS/Covered Bonds  
Tel. +44 (0)20 7855 6672  
cmezzanotte@dbrs.com

**Jerry van Koolbergen**

Managing Director  
Structured Finance - U.S. and European Structured Credit  
Tel. +44 (0)20 7855 6660  
jvankoolbergen@dbrs.com

### STRUCTURED FINANCE - RESEARCH, MODELING AND SURVEILLANCE

**Jan Buckler**

Senior Vice President  
Structured Finance - U.S. and European ABS/RMBS/Covered Bonds  
Tel. +44 (0)20 7855 6678  
jbuckler@dbrs.com

**Jayce Fox**

Vice President  
Structured Finance - U.S. and European ABS/RMBS/Covered Bonds  
Tel. +44 (0)20 7855 6661  
jfox@dbrs.com

### STRUCTURED FINANCE - OPERATIONAL RISK

**Kathleen Tillwitz**

Senior Vice President  
Structured Finance - U.S. and European ABS/RMBS/Covered Bonds  
Tel. +44 (0)20 7855 6665  
ktillwitz@dbrs.com

### Related Research:

Covered Bonds- DBRS Rating Approach  
Legal Criteria for European Structured Finance Transactions and Addenda  
Master European Residential Mortgage-Backed Securities Rating Methodology  
Operational Risk Assessment for European RMBS Servicers  
Rating European Consumer and Commercial Asset-Backed Securitisations  
Master European Granular Corporate Securitisations (SME CLOs)  
Operational Risk Assessment for European ABS and SME CLO Servicers  
Swap Criteria for European Structured Finance Transactions  
Unified Interest Rate Model for European Securitisations  
The Effect of Sovereign Risk on Securitisations in the Euro Area

---

DBRS is a full-service credit rating agency established in 1976. Privately owned and operated without affiliation to any financial institution, DBRS is respected for its independent, third-party evaluations of corporate and government issues, spanning North America, Europe and Asia. DBRS' extensive coverage of securitisations and structured finance transactions solidifies our standing as a leading provider of comprehensive, in-depth credit analysis.

All DBRS ratings and research are available in hard-copy format and electronically on Bloomberg and at DBRS.com, our lead delivery tool for organised, Web-based, up-to-the-minute information. We remain committed to continuously refining our expertise in the analysis of credit quality and are dedicated to maintaining objective and credible opinions within the global financial marketplace.

This methodology replaces and supersedes all related prior methodologies. This methodology may be replaced or amended from time to time and, therefore, DBRS recommends that readers consult [www.dbrs.com](http://www.dbrs.com) for the latest version of its methodologies.



---

# Master European Structured Finance Surveillance Methodology

---

## TABLE OF CONTENTS

Executive Summary	4
General Structured Finance Surveillance Methodology	4
Residential Mortgages	7
Covered Bonds	10
Unsecured and Secured Consumer Loans	12
Consumer and Commercial Leases	15
Auto Wholesale (“Dealer Floor Plan Loans”)	19
Credit Cards	22
Small and Medium Enterprise Loans	25



---

## Executive Summary

---

This methodology includes a description of the DBRS surveillance process including the rating committee process, the types of rating actions taken by rating committees, our disclosure policies and procedures, as well as the sector specific methodologies employed by DBRS in the ongoing monitoring of the following asset types:

- Residential Mortgages
- Covered Bonds
- Unsecured and Secured Consumer Loans
- Consumer and Commercial Leases
- Auto Wholesale Loans
- Credit Cards
- Small and Medium Enterprise Loans

---

## General Structured Finance Surveillance Methodology

---

Once DBRS assigns a final short and/or long-term rating to a security, the surveillance process begins and is continued for as long as DBRS maintains a rating on the security. DBRS monitors all of its outstanding public and private ratings to ensure each rating reflects all data and information requested, received and sourced by DBRS. In general terms, ratings are opinions that reflect the creditworthiness of an issuer, a security, or an obligation. They are opinions based on forward-looking measurements that assess an issuer's ability and willingness to make timely payments on outstanding obligations with respect to the terms of the obligation.

In order to maintain high quality ratings, DBRS takes measures to ensure that the data and information used to monitor a rating is both sufficient and reliable for purposes of rendering rating decisions. In cases where ongoing information is no longer deemed reliable or of sufficient quality, and DBRS is unable to properly monitor the transaction, DBRS may discontinue existing rating(s).

DBRS conducts periodic and sector reviews for all outstanding transactions and each transaction is reviewed by a rating committee at least once per year or in cases when exogenous events warrant. For periodic reviews, data obtained from trustee/servicer reports and trusted third party sources is used to maintain databases that store data and calculate performance metrics. The periodic review conducted by DBRS consists of analysing performance trends, comparing actual performance to DBRS initial expectations and forecasting collateral behaviour and its impact on the rated securities. The evaluation also entails the review of transaction triggers that may change cash flow allocations or cause the replacement of key entities within the transaction structure. For key transaction parties and sovereign entities, DBRS reviews each entity's public rating(s), DBRS internal assessment(s) and other qualitative considerations. When a periodic evaluation determines that a transaction's performance is projected to be outside of DBRS expectations, a rating committee is typically convened for the purpose of determining the appropriate rating action(s).

Sector reviews are used to examine all outstanding rated transactions in each jurisdiction, sector or asset class. The reviews evaluate if and how overall industry, collateral and transaction performance trends or exogenous events may impact the sector and outstanding ratings. Sector reviews may also lead to securities being reviewed by a rating committee to determine if a rating action is warranted.



## SOVEREIGN RISK AND STRUCTURED FINANCE RATINGS

Within the periodic and sector review process, when considering sovereign risk in structured finance rating analysis, DBRS uses a case-by-case approach that is jurisdiction-specific and asset-class specific with the risks and protections of each transaction identified and considered. From a jurisdictional standpoint, DBRS incorporates the probability of a sovereign default into its structured finance rating analysis by applying a sovereign related stress component to its stress scenarios. The “stress scenario regime” manifests itself in the form of increased levels of assumed losses (higher defaults and lower recoveries) and higher assumed default correlations, amongst other assumptions and reflect the characteristics of the types of assets securitised.

## PROCEDURES – DATA RECEIPT AND QUALITY REVIEW

DBRS obtains data from servicer remittance reports, as well as third party sources such as Bloomberg for its periodic reviews, which occur with the same frequency as the receipt of servicer remittance reports. The data is either entered manually or migrated electronically into databases and checked for accuracy via a data review by a surveillance analyst. The databases calculate critical performance characteristics and maintain historical records of performance for trend analysis and comparison to DBRS original expectations. Structural features such as transaction triggers are checked for compliance, the financial strength of sovereign entities and counterparties are evaluated and performance vectors are derived and analysed.

In order to maintain high quality ratings, DBRS takes measures to ensure that the data and information used to monitor a rating is both sufficient and reliable for purposes of rendering rating decisions. In cases where ongoing information is no longer deemed reliable or of sufficient quality, and DBRS is unable to properly monitor the transaction, DBRS may discontinue existing rating(s).

## RATING COMMITTEES

All DBRS ratings and rating actions are determined by rating committees. The purpose of DBRS rating committees is as follows:

- provide objective and independent rating decisions that are a reflection of DBRS opinion, rather than the view of an individual analyst or analysts;
- ensure rating decisions are based on sufficient information, incorporate both global and local considerations, and apply DBRS approved methodologies;
- provide a checkpoint for actual and perceived conflicts of interest among analysts; and
- standardise the rules, procedures and documentation processes to drive efficiency and adherence with respect to rating decisions.

Rating committees have specific member composition requirements and are comprised of experienced and knowledgeable analysts, senior staff and management personnel. For monitoring existing securities, rating committees review each outstanding rating annually. Rating committees also meet on an ‘as-needed’ basis as rating events occur. This approach provides maximum flexibility, as well as permitting timely and informative rating decisions. Generally, all relevant materials are distributed to rating committee voters in advance. The materials contain a rating recommendation for a particular rating action and rationale. The materials are presented and evaluated during the meeting, and following due consideration, a vote is taken.

## RATING ACTIONS

Over the life of each rated security, DBRS may change a rating by raising (upgrade), lowering (downgrade), keeping the rating the same (confirm) or ceasing monitoring of a rating (discontinue). Other rating actions include placing a rating “Under Review”. When a material event occurs that may directly impact the credit quality of a particular security, DBRS attempts to provide an immediate rating opinion. If there is uncertainty regarding the outcome of the event, and DBRS is unable to provide a forward-looking opinion in a timely fashion, the rating(s) of the transaction(s) is placed Under Review.



When a decision is made by DBRS to place a rating Under Review, DBRS provides initial guidance as to its opinion by noting whether the Under Review action has Positive, Negative or Developing Implications. These descriptors indicate DBRS preliminary view of the impact on the credit quality of the security. As situations and potential rating implications may vary, our final rating conclusion may depart from the preliminary assessment. Typically, the subsequent rating action for securities placed Under Review with Positive Implications is either an upgrade or a confirmation. The subsequent rating action for securities placed Under Review with Negative Implications is typically either a downgrade or confirmation. The subsequent rating action for securities placed Under Review with Developing Implications may be an upgrade, downgrade or confirmation. A Developing description is typically used when a structured finance security is highly dependent on a corporate entity that has been placed Under Review with Developing Implications.

In cases where a rating is placed Under Review, DBRS views this as a temporary situation and strives to complete its review and remove the rating from this status as soon as it is appropriate to do so. In the event that a lengthy Under Review period is anticipated, DBRS may provide such guidance in a press release and may, if appropriate, provide guidance as to the anticipated rating that would emerge under a proposed scenario. In the event that DBRS decides to discontinue a rating that is Under Review, DBRS resolves the Under Review status prior to the discontinuance.

## RATINGS

DBRS employs different rating scales for short term debt and long term debt.

Short term debt is rated on a scale ranging from R1 (high), which the highest rating, to D which is the rating for a defaulted security. Rating categories between R1 and D are denoted as R2 through R5. The two highest rating categories, R1 and R2, have subcategories of “high” and “low”, indicating a securities credit profile is at near the top or bottom of the range. A security in the R1 or R2 category with no designation of high or low means the rating is in the middle of the range. Below is a summary of the short term debt rating scale.

- R1 (high) Highest quality
- R1 Superior quality
- R1 (low) Satisfactory quality
- R2 (high) Adequate quality (upper range)
- R2 Adequate quality
- R2 (low) Adequate quality (lower range)
- R3 Adequate quality (bottom of the range)
- R4 Speculative
- R5 Highly Speculative
- D Defaulted

The DBRS long-term debt rating scale ranges from “AAA” to “D” and with the exception of the “AAA” and “D” categories is denoted by the subcategories “high” and “low”. The absence of either a “high” or “low” designation indicates the rating is in the “middle” of the category. Below is a summary of the long term debt ratings scale.

- AAA Highest quality
- AA Superior quality
- A Satisfactory quality
- BBB Adequate quality
- BB Speculative
- B Highly Speculative
- CCC Very Highly Speculative
- CC Very Highly Speculative
- C Very Highly Speculative
- D Defaulted



## DISCLOSURE - PRESS RELEASES

DBRS discloses rating actions made on public transactions through the publication of press releases. Once the rating committee has been concluded, DBRS provides the issuer or sponsor, as applicable, with a copy of the draft press release and, if applicable, a report prepared in relation to the rating action, prior to public dissemination. This step permits the issuer or its agent to review DBRS disclosure documents for the presence of factual errors or the inadvertent inclusion of confidential information. It is DBRS goal to deliver high quality rating opinions in a timely manner to the market.

An issuer/sponsor may request an appeal of a DBRS rating action when:

1. material new information is provided to DBRS (new or existing rating); or
2. there is a significant change in the terms of the proposed issue (new rating).

DBRS considers rating appeals on a case by case basis. DBRS defers issuing a press release and related report pending disposition of the appeal request and resolution of the appeal, as applicable.

The content of press releases includes the name of the issuer, the rating action taken, the rationale for the rating action and final rating determined. Additional information includes the title(s) of the relevant methodology(ies) applied, sources of information used in addition to other pertinent items. For private ratings, a rating letter is provided to the sponsor of the transaction.

## PERFORMANCE ANALYTICS REPORTS (PARs)

For each public transaction, a Performance Analytics Report (PAR) is generated and published on the DBRS website. The PAR provides a summary of the transaction's key analytical considerations in a user-friendly format to enable market participants to assess ongoing performance.

## FEEDBACK MECHANISM

The monitoring process provides important feedback to the Structured Finance Criteria Committee (SFCC), which is tasked with facilitating the ongoing review of existing structured finance rating methodologies, models and key rating assumptions. In cases where the performance of existing transactions is outside of expectations, the feedback mechanism enables the SFCC to determine whether a review of an existing methodology, model or key rating assumption(s) is warranted.

---

# Residential Mortgages

---

The purpose of this section is to set forth the surveillance methodology and process DBRS utilises for residential mortgage securitisations. Included is a discussion of the analysis process and the key credit factors DBRS examines.

## OVERVIEW

Mortgage pool performance expectations can vary with jurisdiction and be a function of the types of mortgages typical to that jurisdiction or a result of cultural or regulatory influences. Various types of mortgage loan structures exist in different jurisdictions, but certain types of structures are frequently found in many jurisdictions. In many jurisdictions, EURIBOR indexed floating rate mortgages tend to be the predominant form of loan structure while others have short term initial fixed rate periods which adjust to a bank-based index rate after a period of two to ten years. Repayment structures of the loan vary by jurisdiction as well and may be either fully amortising or interest only. In addition, certain jurisdictions have distinctive loan features that have developed due to local policies and customs.



Mortgage types may also be segmented into prime and subprime sectors, though the prevalence of the subprime sector may vary considerably between jurisdictions. The prime sector is characterised by borrowers with clean credit histories that have no judgments for non-payment of loans (such as County Court Judgments in the UK), no meaningful history of being in arrears and no insolvencies. Subprime borrowers tend to have one or more of those types of occurrences in their credit history and typically present a greater default risk.

Other factors such as buy-to let mortgages or self certification mortgages present additional elements into the risk profile of a loan. For instance, a buy-to-let property may introduce the necessity of keeping the property leased in order to cover the mortgage payments or increase the likelihood that a borrower will walk away from a property that has not been a good investment. Self certification mortgages introduce a greater likelihood that the borrower may default due to misrepresentations of income and their ability to repay the loan as agreed.

## PERFORMANCE METRICS

Trend analysis of certain performance metrics allows for a more accurate assessment of developments in a transaction's credit profile. While reporting requirements and data availability may vary between issuers and jurisdictions, DBRS monitors the following performance metrics for residential mortgages in order to develop a more comprehensive picture of a transaction's performance.

Key performance metrics such as arrearages, cumulative losses, loss severity, prepayments and excess spread are compared to expectations used when the initial rating(s) were assigned and monitored for trends that could indicate deterioration in performance. These vectors along with event driven metrics, such as transaction triggers and counterparty ratings, are reviewed using a combination of trend and event analysis. If deteriorating trends or exogenous events suggest a rating change may be in order, cumulative losses on the pool are forecasted using a pipeline method; whereby, current levels of cumulative losses are adjusted using historical arrearage roll rates and then plotted against cumulative loss curves used by DBRS at the time that the initial rating was assigned. Available credit enhancement is then compared to current credit enhancement and further analysis, which may include cash flow stress testing, is performed. If such analysis suggests a rating action is warranted, a rating committee is convened to evaluate proposed rating changes.

### *Gross Loss / Recovery Rates (or Loss Severity)*

Losses are a function of gross loss rates and recovery rates. Increased gross loss rates, even when recovery rates are constant, lead to higher net losses and greater stress on available credit enhancement. Expected gross loss rates vary by asset and mortgage type as well as by jurisdiction and originator. DBRS compares changes in loss rates on a monthly basis as well over three and six month periods for trends. Cumulative losses are compared against expectations and stresses used in the original rating of the transaction as well as against credit enhancement available.

As recoveries reduce the losses a transaction's credit enhancement must absorb, recovery rates are an important metric to monitor. Lower than anticipated recovery rates not only represent increased stress in terms of greater losses on current defaults, they may signal greater than anticipated losses in the future, even if gross losses are within expectations. DBRS monitors changes in recovery rates over three and six month periods to evaluate trends.

### *Credit Enhancement / Excess Spread*

Credit enhancement typically comes from a combination of subordination, over-collateralisation, reserve accounts and excess spread. Credit enhancement is monitored both in terms of the level required by transaction documentation as well as its sufficiency to cover projected losses with respect to the multiple ranges employed by DBRS when rating the transaction.



Gross excess spread is the difference between the yield on the asset pool and the cost of funding the securities (including administration fees such as servicing, etc). Typically excess spread absorbs losses each month, before other forms of credit enhancement are drawn upon. After losses have been absorbed, the amount of excess spread available, if any, is “net excess spread”, and usually may be used to replenish credit enhancement that has been reduced from losses in prior months. If net excess spread is not needed to replenish credit enhancement it may be released from the deal. Once released, it cannot be recaptured. DBRS monitors trends in gross and net excess spread over one, three and six month timeframes. A swap may also be introduced into the transaction structure to mitigate interest rate risk and effectively ensure a certain level of excess spread. In those cases, DBRS monitors the financial strength of the swap provider and the attendant triggers to such structural features.

### *Arrearage Rates*

Trends in arrearages may be used to predict future loss trends. Beyond forecasting loss pipelines, certain patterns of arrearage behaviour may also be indicative of other issues. Increasing overall arrearages, roll rates that indicate a decreased number of “arrearage cures” or the build-up of seriously delinquent loans may be attributable to weakening macroeconomic conditions or be indicative of servicing issues. Either may have an impact on future pool performance and must be taken into consideration when evaluating a transaction.

DBRS monitors trends in delinquency rates in terms of monthly as well as three and six month changes for trends and for variance from expectations. Signs of increases in the amount of loans that are in foreclosure or are owned by the lender are monitored using monthly, three and six month timeframes.

### *Ratings and Financial Condition of Key Entities*

The financial condition of counterparties is important to the structure of deals. Not only can the insolvency of a servicer create issues with respect to collections and other servicing functions, but it may also create funds commingling issues that could affect timely remittances to investors. Additionally, as many mortgages are fixed rate, the continued financial strength of swap counterparties is significant to the performance of transactions. DBRS incorporates a financial review of relevant parties in its periodic evaluation of a transaction. This entails a review of the company’s DBRS credit rating or internal assessment in relation to rating thresholds or triggers as well as pertinent financial news. For swap counterparties DBRS also monitors the mark-to market value. If a swap counterparty has been downgraded below the First or Second Rating Threshold (as discussed in Swap Criteria for European Structured Finance Transactions), DBRS requests and reviews a valuation of the swap and the collateral (pursuant to the applicable credit support documentation), and, where relevant, efforts made by the swap counterparty to facilitate its replacement

### *Sovereign Risk*

Sovereign risk can manifest in securitisations in a variety of forms- from the effect the overall economy of the region has on loan repayment behaviour of borrowers to downgrades of key transaction counterparties that may be owned, partially owned, or implicitly supported by the state. Sovereign risks in a transaction are monitored through a combination of reviewing DBRS public rating or internal assessment of the sovereign entity as well as keeping abreast of news that affects the sovereign’s financial stability.

### *Triggers*

Triggers are defined in the governing legal documents for each transaction. Triggers often relate to pool performance, changes in public ratings, internal assessments, and breaches of triggers may necessitate changes such as increases in credit enhancement, the posting of collateral for swaps agreements, or replacement of transaction parties such as servicers or swap providers. DBRS tracks compliance with these triggers in each of its periodic reviews, and to the extent data is available, re-calculates performance metrics tied to triggers in order to evaluate compliance.



## STRESS TESTING

If the periodic review or exogenous events indicate a rating change may be in order, a more comprehensive analysis is performed to determine if a rating committee is necessary; in any event, each rating is reviewed by a rating committee at least once per year. In performing these comprehensive analyses, the standard stresses used by DBRS in rating a transaction are used, but with base case assumptions derived from actual performance of the asset pool. Levels of stress and shapes of loss curves may be modified when exogenous factors indicate such change is prudent.

### *Note:*

Further information about DBRS rating methodology for European mortgage securitisations can be found in the following publications available on the DBRS website.

“Master European Residential Mortgage-Backed Securities Rating Methodology”

“Legal Criteria for European Structured Finance Transactions and Addenda”

“Unified Interest Rate Model for European Securitisations”

“Swap Criteria for European Structured Finance Transactions”

---

## Covered Bonds

---

The purpose of this section is to set forth the surveillance methodology and process DBRS utilises for European covered bonds. Included is a discussion of the analysis process and the key credit factors DBRS reviews at regular intervals.

### OVERVIEW

Covered bonds maintain two sources of repayment - first from a regulated banking entity or specialised funding institution and secondly if needed, a cover pool of collateral, which is comprised of various types of collateral : residential mortgages, public sector loans and commercial mortgages or other collateral as recognized under certain legislations. Accordingly, DBRS takes a multi-faceted approach to monitoring the risks that follows the three building blocks around which the covered bond rating methodology revolves. As the first source of repayment is the banking entity or funding institution, DBRS monitors the financial condition of the issuing entity in order to assess their ability to fulfill their obligations. Secondly, DBRS monitors direct changes to the structure as well as changes in the legal framework of jurisdictions where covered bonds are outstanding in that these changes may have a positive or negative impact on existing structures. The third facet of the surveillance of covered bonds is the monitoring of the cover pool and the outstanding covered bonds.

### PERFORMANCE METRICS

#### *Ratings and Financial Condition of Key Entities*

As the primary source of repayment of the bonds, the financial condition of the issuing entity is of primary importance heightened beyond that of securitisation transaction for instance. As a result, DBRS monitors the issuer’s public rating or, in cases where DBRS does not maintain a public rating, we monitor our internal assessment. An issuer’s public rating or internal assessment is conducted and monitored by DBRS Financial Institutions Group (FIG), in accordance with applicable DBRS rating methodologies. The surveillance process is the same for key transaction participants, such as account bank providers and counterparties, such as swap counterparties. For swap counterparties DBRS also monitors the mark-to-market value. If a swap counterparty has been downgraded below the First or Second Rating Threshold (as discussed in Swap Criteria for European Structured Finance Transactions), DBRS requests and reviews a valuation of the swap and the collateral (pursuant to the applicable credit support documentation), and, where relevant, efforts made by the swap counterparty to facilitate its replacement.



### ***Sovereign Risk***

Sovereign risk can affect covered bonds in both the financial stability of the counterparties such as the issuing entity and the cover pool assets. Sovereign risk in a transaction is monitored through a combination of reviewing DBRS public rating or internal assessment of the sovereign entity as well as keeping abreast of news that affects the sovereign's financial stability.

### ***Legal and Structural Framework***

While Issuers may choose to set up covered bond programmes outside of an existing legislative framework, most of existing European cover bond transactions are issued under their nation's specific legislative framework for covered bonds. As a result, DBRS endeavours to monitor the legislative landscape for changes that could affect the structure of outstanding covered bonds. Similarly, covered bonds issuers may choose to amend additional structuring features of their programme. In these instances, DBRS reviews the proposed changes and assesses the potential impact on the outstanding ratings. Particular attention is paid to proposed changes in connection with over-collateralisation nature, levels and commitment, the asset-liability mismatch, the activation of back-up entities, the replacement of transaction parties or rating triggers leading to replacement of transaction parties. Swaps are monitored with respect to the financial condition of the swap counterparty as well as the mark-to market data for the swap.

### ***The Cover Pool of Assets***

The analysis of the cover pool of assets is accomplished using the same DBRS methodologies used in analysing stand-alone securitisations backed by the same types of assets. Typically these would include past performance and trend analysis of certain metrics as well as monitoring exogenous events that could affect performance of the cover pool such as macro-economic factors. The metrics being monitored typically include arrearage rates, loss rates (gross and net, when data is available), prepayment speeds, mark-to-market value of cover pool assets and swaps and other performance measures specific to a particular asset class. These metrics are monitored over monthly, three month and six month periods for signs of performance deterioration, as well as for comparison to original expectations and historical performance. The metrics may also be used for developing performance vectors that may be used in the event deeper analysis becomes warranted. As covered bonds programmes are evolving over time through asset substitution or external factors listed above, DBRS endeavours to review once a year the underwriting and servicing criteria prevailing for the assets allocated to the cover pool.

## **STRESS TESTING**

While each rating is reviewed by a rating committee at least once per year, DBRS reviews the refinancing stresses applied in its modelling of the cover pool on a more frequent basis due to the market-value risk that may be caused by the inherent maturity gap between the covered bonds and the cover pool. In parallel, additional stress testing may be applied to the cover pool in a consistent manner with those used in analysing stand-alone securitisations backed by the same types of assets, but based upon the performance trends observed in the relevant asset type.

### ***Note:***

Further information about DBRS rating methodology for covered bonds can be found in the following publications available on the DRBS website.

“Covered Bonds- DBRS Rating Approach”

“Master European Residential Mortgage-Backed Securities Rating Methodology”

“Legal Criteria for European Structured Finance Transactions and Addenda”

“Unified Interest Rate Model for European Securitisations”

“Swap Criteria for European Structured Finance Transactions”

“Rating European Consumer and Commercial Asset-Backed Securitisations”



---

## Unsecured and Secured Consumer Loans

---

### OVERVIEW

Consumer term loans in the context of ABS include secured loans, in which the loan is secured by an asset, such as an automobile, and unsecured term loans which are not secured by a physical asset. Consumer term loans are dependent for repayment/recovery upon the borrower making the agreed upon payments. Unsecured consumer loans are extended for a wide variety of purposes, from home improvement to education to financing electronic and white goods.

Term loans are typically level-pay instalment loans payable over a predetermined loan term. A small percentage of auto loans are structured as balloons. A balloon loan has the advantage of low monthly payments during the term of the loan, requiring substantially lower capital repayment during the term when compared to level-pay. However, balloon loans have a large payment at maturity and similar to leases confront substantial residual value risk.

### PERFORMANCE METRICS

Trend analysis of certain performance metrics allows for a more accurate assessment of developments in a transaction's credit profile. While reporting requirements and data availability may vary between issuers and jurisdictions, DBRS monitors the following performance metrics for auto loan ABS in order to develop a more comprehensive picture of a transaction's performance.

A key performance metric evaluated is expected cumulative net losses (CNLs) measured against available credit enhancement. This evaluation determines whether each security's rating is within acceptable loss coverage ratios for its current rating. Other metrics, for which performance vectors are developed, include excess spread levels, arrearages and loss severity. Compliance with transaction triggers and counterparty rating criteria are also reviewed.

#### *Gross Loss / Recovery Rates (or Loss Severity)*

DBRS tracks changes in cumulative net losses ("CNLs") calculation with the same frequency as transaction performance remittance reports are provided to investors. CNLs are a function of gross loss rates and recovery rates. Increased gross loss rates, even when recovery rates are constant, lead to higher net losses and greater stress on available credit enhancement.

Expected gross loss rates vary by asset type, jurisdiction and by originator/issuer. DBRS compares changes in loss rates on a monthly basis as well over three and six month periods to denote trends. Cumulative losses are compared against expectations and stresses used in the original rating of the transaction and are also projected for comparison to available credit enhancement.

As recoveries reduce the losses a transaction's credit enhancement must absorb, the recovery rate is an important metric to monitor in secured lending transactions. For securitisations of unsecured loans, the recovery rate is also monitored, but due to the typically lower absolute levels of recovery in the event of default, it has a lesser impact on the overall performance of the transaction. DBRS monitors trends in recovery rates over three and six month periods.

#### *Projecting Expected Cumulative Net Losses ("CNL")*

DBRS uses two methods for projecting the expected cumulative net loss of loan pools: the loss curve and the pool factor methods.

#### *Loss Curve Method*

This method assumes that losses occur with the timing of a cumulative loss curve developed by DBRS when assigning initial ratings. To calculate CNLs using this method, current CNLs are plotted on the



cumulative loss curve to ascertain the percentage of lifetime losses that will have been experienced, at that point in time. To project lifetime CNLs for a transaction, the current CNLs are then divided by the percentage obtained from plotting the transaction's seasoning on the cumulative loss curve. In the final step, the current CNLs are subtracted from projected lifetime CNLs to arrive at the projected losses remaining.

For example, if current cumulative losses are 3.0% and the transaction is seasoned 23 months, the cumulative loss curve would be consulted to see what percentage of losses are expected to have occurred by month 23. If the curve assumes 45% of lifetime cumulative net losses will occur by month 23, the lifetime CNLs would be  $.03 \div .45$ , or 6.67%. The remaining CNLs would be 3.67%, or 6.67% - 3.0%.

### *Pool Factor Method*

The pool factor method assumes that future losses continue at a rate correlated to the amortisation of the pool. To calculate remaining losses using this method, current period CNLs are divided by one minus the current pool factor to arrive at projected lifetime losses. To arrive at the cumulative net losses remaining in the transaction, current net losses are then subtracted from the projected lifetime losses calculated in the first step. For example, if current cumulative net losses equal 2% and the pool factor is 60%, lifetime cumulative net losses are projected to be  $.02 \div (1 - .6)$ , or 5%. The losses remaining in the transaction would then be 5% - 2%, or 3%.

### *Credit Enhancement / Excess Spread*

Credit enhancement may come in the form of subordination, over-collateralisation, reserve accounts and excess spread (or a combination of these). Credit enhancement is monitored both in terms of the level required by transaction documentation and its sufficiency to cover losses projected by DBRS with respect to the multiple ranges employed by DBRS when rating the transaction.

DBRS monitors trends in gross and net excess spread as well as yield. Gross excess spread is the difference between the yield on the asset pool and the cost of funding the securities (including administration fees such as servicing, etc). Excess spread absorbs losses each month, before other forms of credit enhancement are drawn upon. After losses have been absorbed, the amount of excess spread available, if any, is "net excess spread", and is typically used to replenish credit enhancement that has been reduced from losses in prior months. If net excess spread is not needed to replenish credit enhancement it may be released from the deal. Once released, it cannot be recaptured. If a swap has been incorporated into the transaction to mitigate interest rate risk, and effectively ensure a certain level of excess spread, DBRS monitors the financial strength of the swap provider, mark-to market data and any attendant triggers.

### *Arrears Rates / Repossession Inventory*

Trends in the amount of loans in arrears may be used to predict future loss trends. Beyond forecasting loss pipelines, certain patterns of delinquency behaviour may also be indicative of other issues. Increasing overall arrearages (that are not attributable to seasonality), roll rates that indicate a decreased number of "arrearage cures" or the build-up of loans seriously in arrears may be attributable to weakening macroeconomic conditions or be indicative of servicing issues. Either may have an impact on future pool performance and must be taken into consideration when evaluating a transaction.

In secured loan securitisations, where assets may be repossessed, repossession (repo) inventory represents assets that have been repossessed, but not yet liquidated. Deal structures may require a loan be charged off at the earlier of liquidation, a specific period of time after default, or a specified time after the asset has been repossessed. Hence, loans secured by assets in the repo inventory may have been fully charged off. As such, they represent unrealised recoveries and are monitored for their effect on asset cash flows. A growing repo inventory may be indicative of issues ranging from weak demand for the assets to servicer problems in liquidating the repossessed assets. Either of these situations would lead to lower recoveries, higher losses and greater stress on the transaction's credit enhancement in the future.



DBRS monitors trends in delinquency rates in terms of monthly as well as three and six month changes. DBRS endeavours to monitor repossession inventory by examining signs of build-up or to confirm a satisfactory level of asset disposition

### *Ratings and Financial Condition of Key Entities*

The financial condition of counterparties is important to the structure of deals. Not only can the insolvency of a servicer create issues with respect to collections and other servicing functions, but it may also create funds commingling issues that could affect timely remittances to investors. DBRS incorporates a financial review of relevant parties in its periodic evaluation of a transaction. This entails a review of the company's DBRS credit rating or internal assessment in relation to rating thresholds or triggers as well as pertinent financial news. For swap counterparties DBRS also monitors the mark-to market value. If a swap counterparty has been downgraded below the First or Second Rating Threshold (as discussed in Swap Criteria for European Structured Finance Transactions), DBRS requests and reviews a valuation of the swap and the collateral (pursuant to the applicable credit support documentation), and, where relevant, efforts made by the swap counterparty to facilitate its replacement

### *Sovereign Risk*

Sovereign risk can manifest itself in securitisations in a variety of forms- from the effect the overall economy of the region has on loan repayment behaviour of borrowers to downgrades of key transaction counterparties that may be owned, partially owned, or implicitly supported by the state. Sovereign risks in a transaction are monitored through a combination of reviewing DBRS public rating or internal assessment of the sovereign entity as well as keeping abreast of news that affects the sovereign's financial stability.

### *Triggers*

Triggers are defined in the governing legal documents for each transaction. Triggers often relate to pool performance or changes in ratings for transaction participants. Breaches of triggers may necessitate changes such as increases in credit enhancement or replacement of transaction parties such as the servicer. These triggers are typically tied to pool loss and delinquency rates. DBRS tracks compliance with these triggers in each of its periodic reviews and may re-calculate certain performance metrics to assist in the evaluation.

## **STRESS TESTING**

If the periodic review or exogenous events indicate a rating change may be in order, a more comprehensive analysis is performed to determine if a rating committee is necessary; in any event, each rating is reviewed by a rating committee at least once per year. DBRS uses the same methodologies for surveillance as is used when assigning the initial rating(s) to the transaction, but may adjust base case assumptions for performance variables based upon actual performance of the asset pool. The timing of losses may be stressed with back loaded, front loaded or "belly" curves. While front loaded loss curves are useful in simulating stress in cases where credit enhancement is not fully funded at closing, for more seasoned transactions, a front loaded scenario is less stressful. However, if stress is detected early in the life of a transaction, appropriately front loaded curves are also utilised. For more seasoned transactions, a curve wherein losses are back loaded to test the structure's ability to withstand tail risk is used. In cases where the above scenarios are not applicable, alternative loss timing methods such as conditional default rates (CDRs) or a "belly" curve may be used. The "belly" significantly increases losses in the middle of a transaction to test the structure's ability to withstand event risk scenarios. Recovery rates are based on trends evidenced in the transaction's observed performance and are generally based on a transaction's three month average recovery rate. In Auto ABS, recoveries may be adjusted to reflect expected changes in the used car market. Prepayment scenarios typically utilise voluntary prepayment speed vectors that are based on a transaction's historical performance.



**Note:**

Further information about DBRS rating methodology for secured and unsecured loan securitisations can be found in the following publications available on the DBRS website.

“Rating European Consumer and Commercial Asset-Backed Securitizations”

“Legal Criteria for European Structured Finance Transactions and Addenda”

“Unified Interest Rate Model for European Securitizations”

“Swap Criteria for European Structured Finance Transactions”

---

## Consumer and Commercial Leases

---

The purpose of this section is to set forth the surveillance methodology and process DBRS utilises for European consumer and commercial lease ABS. Included is a discussion of the key credit factors DBRS examines and how they are viewed.

### OVERVIEW

Lease securitisations may involve leases for vehicles, equipment, real estate or other types of assets. Participants in the lease market include banks, captive finance subsidiaries of vehicle and equipment manufacturers and independent finance companies.

In general terms, a finance lease is a contractual arrangement whereby a lessor purchases an asset and makes it available to a lessee (or end-user) for the term of the lease in exchange for the payment of regular instalments. At the end of the lease contract, the lessee may have an option to acquire the asset at a pre-determined price (a closed-end lease) or may be committed to purchase the asset at a predetermined price (an open-end lease). The predetermined price, or residual value, is set so that the net present value of the instalments plus the residual value is equal to the amount financed upfront by the lessor. While consumer leases typically provide for level instalments, commercial leases may include more complex terms such as ‘interest only’ periods or tailored instalments.

At the end of a closed-end lease term, the end user has an option to purchase the asset for a predetermined amount from the bank or finance company. At that time, the end-user is likely to evaluate the value of the asset versus the cost of acquiring the asset from the lessor. If the value of the asset falls short of the cost of buying it, the end-user is likely to forfeit the option.

The prevalence of open-end or closed-end leases varies by jurisdiction, related to the legal and tax environment and customer preferences. Lease ABS transactions may involve the securitisation of closed-end leases, open-end leases or only the instalments of leases to the exclusion of the residual value payments.

Auto lease ABS transactions may be collateralised by new or used automobiles. Typically the lessor purchases a vehicle and leases it to the consumer. The lessee (i.e. the consumer) then pays the lessor for the right to use the vehicle during the term of the lease. At the end of the lease, the lessee may have the right to purchase the vehicle for a pre-determined price set in the lease contract (the “residual” value of the vehicle). If the option does not exist or the lessee does not exercise the option, the lessor retains ownership and must dispose of the vehicle. This could lead to the vehicle being disposed of for less than its contractual residual value. As the typical auto lease securitisation includes the residual value component of the lease in the trust valuation, the securitisation is exposed to this residual risk, in addition to the credit risk presented by the lessee defaulting on the lease contract.

Transactions in the equipment lease ABS market are supported by leases that may encompass a variety of equipment types (e.g. industrial, medical, computer equipment). The type of equipment being leased plays



an important factor in performance. Certain types of equipment tend to have better loss performance than others due to less frequency of default, lower loss severities upon liquidation of the equipment or a combination of the two. Loss severities, residual values and to some degree prepayment activity can be greatly affected by the obsolescence factor, such as the case with computer equipment.

## PERFORMANCE METRICS

Trend analysis of certain performance metrics allows for a more accurate assessment of developments in a transaction's credit profile. While reporting requirements and data availability may vary between issuers, DBRS endeavours to monitor the following performance metrics to develop a more comprehensive picture of a transaction's performance. One of the key performance vectors evaluated is that for expected cumulative net losses ("CNLs"). Expected CNLs are measured against available credit enhancement to determine if the transaction is still within acceptable loss coverage ratios for its current rating. Other metrics for which vectors are developed include residual value realisation, turn-in rates, delinquencies and loss severity. These vectors along with event driven metrics such as transaction triggers and counterparty ratings are reviewed using a combination of trend and event analysis.

### *Credit Losses / Residual Losses*

As discussed, DBRS performs a cumulative net losses ("CNLs") calculation with the same frequency as remittances to investors. Cumulative net losses are a function of both credit losses and residual losses. Credit losses arise from a combination of defaulted leases and recoveries that are insufficient to replenish the cash flow lost to the transaction.

Increasing trends in charge-off or default activity may be attributed to a variety of causes ranging from macroeconomic conditions to problems at the servicer level. DBRS monitors default activity for trigger compliance where applicable, and to derive vectors for projecting future performance. Trends in default activity are monitored by using changes in monthly activity, as well as over three month and six month periods. Cumulative charge-offs are measured against expectations and stresses used in the original rating of the transaction.

Recoveries reduce losses the credit enhancement must absorb. Recovery rates can be affected by various factors such as macroeconomic conditions, servicer effectiveness in liquidating the asset, prices of the asset in the used market, as well as the type of asset being liquidated. For instance, product obsolescence of some computer equipment, may reduce recovery rates in seasoned securitisations involving that type of equipment while other types of equipment, such as certain medical equipment, may retain their value and result in much higher recoveries. In auto lease securitisations, recovery is significantly affected by supply and demand (which translates into vehicle prices) in the used vehicle market as well as the make and model of the vehicle. Factors that affect the supply and demand in the used vehicle market include seasonal changes, demand for new cars (which can be affected by manufacturer incentives among other things), market saturation and general economic conditions. DBRS monitors trends in recovery rates by examining changes over monthly, three month and six month periods. These trends are compared to assumptions used in the most recent rating of the transaction and used to generate vectors for projecting future performance.

Residual losses arise when the leased asset is not purchased for the pre-determined price and the financing company must dispose of it. Thus, they are a function of the turn-in rate (or the percentage of assets not purchased at the end of the lease) and the recovery rate on the asset when sold. Turn-in rates are correlated with the accuracy of the initial residual value set at lease inception, and are generally affected by the same factors affecting recovery rates. DBRS monitors residual loss accumulation and trends over three and six month periods when evaluating this key metric.

### *Projecting Expected Cumulative Net Losses ("CNL")*

DBRS uses a two step method for projecting the expected CNLs in order to reflect the fact that pool losses may come from credit losses as well as residual losses. In the first step, credit losses are projected



using the loss curve and pool factor methods. In the second step, turn-in rates are applied to the remaining balance of leases projected to survive then multiplied by the transaction's adjusted historical residual recovery rate. Finally the credit loss projection and the residual loss projections are combined to arrive at a total CNL projection.

### *Projecting Credit Losses*

DBRS uses two methodologies in determining remaining cumulative net credit loss. The two methodologies are discussed below.

#### *Loss Curve Method*

This method assumes that losses occur with the timing of the loss curve that has been developed by DBRS in rating the transaction. To calculate credit related CNLs using this method, current credit related CNLs are plotted on the cumulative loss curve to ascertain the percentage of lifetime losses that will have been experienced at that point in time. To project lifetime credit related CNLs for a transaction, the current credit related CNLs are then divided by the percentage obtained from plotting the transaction's seasoning on the cumulative loss curve. The current credit related CNLs are then subtracted from projected lifetime credit related CNLs to arrive at the credit related losses remaining.

For example, if current credit related cumulative losses are 3.0% and the transaction is 20 months seasoned, the cumulative loss curve would be consulted to see what percentage of losses are expected to have occurred by month 20. If the curve assumes 55% of lifetime cumulative net losses will occur by month 20, the lifetime credit related CNLs would be  $0.03 \div 0.55$ , or 5.45%. The remaining credit related CNLs would be 2.45%, or  $5.45\% - 3.00\%$ .

#### *Pool Factor Method*

The pool factor method assumes that future losses continue at a rate correlated to the amortisation of the pool. To calculate remaining losses using this method, current period credit related cumulative net losses are divided by one minus the current pool factor to arrive at projected lifetime credit related losses. To arrive at the cumulative credit related net losses remaining in the transaction, current credit related losses are then subtracted from the projected lifetime credit related losses calculated in the first step. For example, if current cumulative credit related net losses equal 3% and the pool factor is 40%, lifetime cumulative credit related net losses are projected to be  $.03 \div (1 - .40)$ , or 5%. The credit related losses remaining in the transaction would then be  $5\% - 3\%$ , or 2%.

### *Projecting Residual Value Losses*

To arrive at the survivor rate, the current principal balance of the pool is reduced by the defaults projected to occur in the first step of the process. The historical turn-in rate is adjusted by using DBRS rating based stresses, and multiplied by the surviving balance. Finally, the historical recovery rate, as adjusted by applying DBRS stresses used in rating the deal to the projected turn-in rate to arrive at remaining residual losses in the transaction. For example, if the pool factor is 60%, the remaining credit losses are projected to be 1.5% (of original principal balance) and historical recovery rates have been 50%, then the turn-in rate will be applied to 58.5%, or  $(.60 - (.015))$ . If a stressed 95% turn in rate is used, then we project 55.6% in remaining turn-ins. If the historical residual rate has been 97%, and a 10% recovery stress is applied, then we would expect approximately 7.06% in residual losses remain in the pool, or  $.556 \times (1 - (.97 \times .9))$ .

### *Projecting Cumulative Net Losses*

In this step the projected credit losses and projected residual losses are combined. Using the example from above, if projected remaining credit losses are 1.50% and projected remaining residual losses are 7.06%, the projected cumulative net losses remaining are 8.56%, or 1.50% plus 7.06%.

### *Credit Enhancement / Excess Spread*

Gross excess spread is the difference between the yield on the asset pool and the cost of funding the securi-



ties (including administration fees such as servicing, etc). Excess spread absorbs losses each month, usually before other forms of credit enhancement are used. After losses have been absorbed, the amount of excess spread available, if any, is termed “net excess spread”, and may be used to replenish credit enhancement that has been reduced from losses in prior months. If not needed to replenish credit enhancement, it is released from the transaction and cannot be reclaimed.

DBRS monitors trends in gross and net excess spread, as well as yield. If a swap is introduced into the deal structure to mitigate interest rate risk, DBRS also monitors the financial strength of the swap provider, mark to market data when applicable and any attendant triggers.

Credit enhancement may come in the form of subordination, over-collateralisation, reserve accounts and excess spread (or some combination of these). Credit enhancement is monitored both in terms of the level required by deal documentation, as well as its sufficiency to cover losses in respect of the multiples DBRS uses in the rating process. However the final determination of a rating reflects the confluence of all key qualitative and quantitative analytical considerations.

#### ***Arrears Rates/ Repossession Inventory***

Trends in arrearage rates may be used to predict future loss trends. Increasing overall delinquencies, roll rates that indicate a decreased number of “cures” or the build-up of leases seriously in arrears may be attributable to weakening macroeconomic conditions but could also be indicative of servicing issues. Either may have an impact on future pool performance and must be taken into consideration when evaluating a transaction. DBRS monitors trends in arrearage rates in terms of monthly change as well as changes over three and six month periods.

Repossession inventory represents equipment that has been repossessed, but not yet liquidated/remarketed. As transactions typically require a lease to be charged off at a certain level of delinquency, the equipment in repossession inventory may have been fully charged off. In those instances, they represent unrealised recoveries. Additionally, a growing repossession inventory may be an early warning of future stress such as weak demand for the equipment or servicer problems in the disposition of the assets.

#### ***Ratings and Financial Condition of Key Entities***

The financial condition of corporate entities such as the servicer or counterparties, such as the issuer account bank or swap provider is important to the structure of the deal. Insolvency is of particular concern for small financing companies with relatively small capital bases as their insolvency could result in significant disruptions in servicing and collections activities, and alter the performance of a portfolio. Additionally, a small capital base may inhibit a sponsor’s compliance with repurchase obligations arising from ineligible collateral, or their ability to repurchase or replace impaired leases from the pool. Accordingly, DBRS incorporates a financial review of relevant parties in its periodic evaluation of a transaction. This entails a review of the company’s DBRS credit rating or internal assessment in relation to rating thresholds or triggers as well as pertinent financial news. For swap counterparties DBRS also monitors the mark-to market value. If a swap counterparty has been downgraded below the First or Second Rating Threshold (as discussed in Swap Criteria for European Structured Finance Transactions), DBRS requests and reviews a valuation of the swap and the collateral (pursuant to the applicable credit support documentation), and, where relevant, efforts made by the swap counterparty to facilitate its replacement.

#### ***Sovereign Risk***

Sovereign risk can manifest itself in securitisations in a variety of forms- from the effect the overall economy of the region has on loan repayment behaviour of borrowers to downgrades of key transaction counterparties that may be owned, partially owned, or implicitly supported by the state. Sovereign risks in a transaction are monitored through a combination of reviewing DBRS public rating or internal assessment of the sovereign entity as well as keeping abreast of news that affects the sovereign’s financial stability.



### *Triggers*

Triggers are defined in the governing legal documents for each transaction. Triggers are often tied to pool performance and breaches of triggers may necessitate changes such as increases in required credit enhancement, the posting of collateral or replacement of transaction parties. DBRS tracks compliance with these triggers in each of its periodic reviews, and to the extent data is available, re-calculates certain performance metrics to evaluate compliance.

## STRESS TESTING

If the periodic review or exogenous events indicate a rating change may be in order, a more comprehensive analysis is performed to determine if a rating committee is necessary; in any event, each rating is reviewed by a rating committee at least once per year. DBRS utilises its standard stresses in its analysis but applies them to historical performance.

Losses are based upon the base case projections and stressed by applicable rating multiples. Timing of losses is plotted on loss curves developed for the transaction during the rating process, but may utilise front loaded, back loaded or “belly” curves as performance and exogenous factors warrant. Recoveries for credit and residual losses are lagged in accordance with DBRS methodologies used in rating the transaction, but may be adjusted for exogenous factors.

### *Note:*

Further information about DBRS rating methodology for consumer and commercial lease securitisations can be found in the following publications available on the DBRS website:

“Rating European Consumer and Commercial Asset-Backed Securitisations”

“Legal Criteria for European Structured Finance Transactions and Addenda”

“Unified Interest Rate Model for European Securitisations”

“Swap Criteria for European Structured Finance Transactions”

---

## Auto Wholesale (“Dealer Floor Plan Loans”)

---

The purpose of this section is to set forth the surveillance methodology and process DBRS utilises for European automobile wholesale ABS (also called “dealer floor plan” securitisations). Included is a discussion of the key credit factors DBRS examines and how they are analysed.

### OVERVIEW

The assets in auto wholesale loan securitisations are revolving lines of credit that have been extended to auto dealerships in order to finance their inventory at wholesale rates. When an auto is sold by the dealership, the warehouse loan is repaid, and a new loan is usually taken out to purchase another auto for the dealership’s inventory. The loans may be extended by captive or independent finance companies. Often, captive finance companies that are subsidiaries of auto manufacturers are the lenders as they can provide attractive incentive rates to dealers.

The data monitored by DBRS reflects both the inherent performance characteristics of the collateral and the structure of the deal.

### PERFORMANCE METRICS

Trend analysis of certain performance metrics allows for a more accurate assessment of developments in a transaction’s credit profile. While reporting requirements and data availability may vary between issuers, DBRS endeavours to monitor the following performance metrics to develop a more comprehensive picture of a transaction’s performance. Some of the key vectors include default and loss rates, credit



enhancement levels, portfolio turnover and asset composition. These vectors along with event driven metrics such as transaction triggers and counterparty ratings are reviewed using a combination of trend and event analysis. Most performance metrics are typically monitored as rolling three month averages to filter seasonality from the trend lines, though significant changes in monthly performance are also noted.

#### ***Default & Loss Rates***

Net losses are a function of default frequency and severity of loss upon disposition of the asset. Monthly and three month averages are tracked for both default and loss rates. Developing trends, in either component, that are projected to place performance outside of DBRS original expectations may result in a re-evaluation of a deal's current rating.

#### ***Credit Enhancement***

Credit enhancement may come in the form of subordination, over-collateralisation, reserve accounts and excess spread (or typically, a combination of these). Credit enhancement is monitored both in terms of the level required by deal documentation and its sufficiency to cover losses projected by DBRS. Excess spread, a component of credit enhancement is monitored both for its sufficiency to protect against loss, and as a bellwether of early trends in yield or index compression. In its evaluation, DBRS monitors the components that comprise excess spread on the basis of monthly changes as well as changes over three month and six month periods to identify trends.

#### ***Portfolio Turnover (Monthly Payment Rates, Repurchase Rates, Loan Aging)***

Repayment rates are the key determinant in how quickly investors are repaid in a rapid amortisation scenario, thus either extending or reducing the amount of time investors may be exposed to asset deterioration. Additionally, repayment rates may be used as an indicator of deal stress. Slow repayment speeds that are not attributable to seasonality may be indicative of a lack of demand for the equipment and signal a forthcoming increase in defaults. Slow repayment rates may also be a sign that equipment is being sold "out of trust" (i.e. the proceeds from sale of the equipment are not being used to repay the inventory loan) which may indicate issues in the management of the program or, in a worst case scenario, fraud. In some jurisdictions, additional lots are used to "warehouse" autos when dealers do not have the space necessary to keep their full inventory on site. In these jurisdictions the owner of the "warehouse lot" may have rights to dispose of the cars if the rental fee is unpaid, thus increasing the risk of vehicles sold out of trust. While deals have trigger events tied to minimum repayment rates, in favourable economic conditions, the average repayment rate of many transactions is well above that trigger level. DBRS monitors trends in repayment rates in order to predict asset deterioration before trigger levels are breached by examining changes in repayment rates over monthly, three month and six month periods.

Purchase rates are the measurement of how quickly the pool is being replenished and are important in maintaining the proper ratio of assets to liabilities. A reduction in purchase rates may indicate problems with demand for the equipment or financial problems at the dealer level. DBRS monitors changes in purchase rates over monthly, three month and six month periods for trends.

Portfolio aging, which is a function of repayment rates, often serves as an early warning of demand weakness, and due to the depreciating nature of the collateral, presents the potential for higher loss severities in the event of a default. DBRS compares aging buckets over the three most recent reporting periods to identify trends that may indicate a change in performance.

#### ***Ratings and Financial Condition of Key Entities***

The financial condition of corporate entities such as the servicer or counterparties, the issuer account bank or swap provider is important to the structure of the deal. Not only can the insolvency of a servicer create issues with respect to collections and other servicing functions, but it may also create funds commingling issues that could affect timely remittances to investors. In addition, auto wholesale securitisations inherently have significant exposure to manufacturers and/or financing companies that represent meaningful concentrations in the pool. The insolvency of such an entity, depending on the type of insolvency, may



have a significant impact on losses, the timely payment of amounts due investors and various performance metrics such as payment rates. In this scenario, in addition to issues presented by servicing disruption, DBRS also expects decreased demand for the equipment (fueled by consumer concerns over ongoing service and maintenance availability) that would likely result in a greater frequency of defaults and suppression of recovery rates. Due to the potential for inadequate servicing of the loans, “out of trust” sales may also increase (especially in jurisdictions where the vehicles are being warehoused on non-dealer lots). While insolvency is typically an early amortisation event in the deal structure, DBRS incorporates a financial review of relevant parties in its periodic evaluation of a transaction. This entails a review of the company’s DBRS credit rating or internal assessment in relation to rating thresholds or triggers as well as pertinent financial news. For swap counterparties DBRS also monitors the mark-to-market value when. If a swap counterparty has been downgraded below the First or Second Rating Threshold (as discussed in Swap Criteria for European Structured Finance Transactions), DBRS requests and reviews a valuation of the swap and the collateral (pursuant to the applicable credit support documentation), and, where relevant, efforts made by the swap counterparty to facilitate its replacement.

### ***Sovereign Risk***

Sovereign risk can manifest itself in securitisations in a variety of forms- from the effect the overall economy of the region has on loan repayment behaviour of borrowers to downgrades of key transaction counterparties that may be owned, partially owned, or implicitly supported by the state. Sovereign risks in a transaction are monitored through a combination of reviewing DBRS public rating or internal assessment of the sovereign entity as well as keeping abreast of news that affects the sovereign’s financial stability.

### ***Revolving Periods and Pool Concentrations***

Due to the revolving nature of the deal structure, a pool’s composition may change over time. Transactions are structured with concentration limits on various characteristics such as dealer concentrations, asset type concentrations, or other pertinent risk factors. The monitoring of these concentrations not only provides insight into the management of the floor-plan program (and its compliance with limits in the legal documentation) but can also be utilised in predicting deal stress brought on by exogenous factors.

### ***Triggers***

Asset pool performance or events related to the financial condition or performance of certain entities may trigger the early amortisation of a transaction. These early amortisation trigger events typically include a decline in repayment rates below a prescribed level, insolvency of certain key parties to the transaction such as a manufacturer, draws on credit enhancement, the invalidation or breaches of representations made in the transaction’s documents and failure to remit collections on a timely basis. DBRS tracks compliance with these triggers in each of its periodic reviews, and to the extent data is available, re-calculates certain performance metrics to evaluate compliance.

## **STRESS TESTING**

If the periodic review or exogenous events indicate a rating change may be in order, a more comprehensive analysis is performed to determine if a rating committee is necessary; in any event, each rating is reviewed by a rating committee at least once per year. DBRS Surveillance uses the same methodologies used to rate the transaction, but may adjust base case assumptions for performance variables based upon actual performance of the asset pool.

### ***Note:***

Further information about DBRS rating methodology for auto wholesale securitisations can be found in the following publications available on the DBRS website.

“Legal Criteria for European Structured Finance Transactions and Addenda”

“Unified Interest Rate Model for European Securitisations”

“Swap Criteria for European Structured Finance Transactions”

---

## Credit Cards

---

The purpose of this section is to set forth the surveillance methodology and process DBRS utilises for European credit card ABS. Included is a discussion of the analytical process and of key credit factors DBRS examines.

### OVERVIEW

The assets in credit card securitisations are the receivables generated from cardholder usage. Cardholders may pay their principal balance in full each month (i.e. “convenience users”) or carry a balance from month to month (i.e. “revolvers”). Due to the potentially short life of the receivables, credit card securitisations often utilise a structure that has a revolving period followed by an amortisation period. The breach of triggers related to certain performance metrics, the failure of the sponsor to comply with its obligations, or the failure of the issuer to meet its payment obligations will typically cause an early amortisation of such transactions.

However, there can be significant variations on that structure that will have an impact on how investors are paid in the event of an early amortisation. Credit card securitisation sponsors usually utilise a master trust structure that allows a sponsor to issue multiple series and collateralise them with a single receivables pool. Methods for allocating cash among series can differ between master trusts, and in the event of an early amortisation, may change within the same master trust.

### PERFORMANCE METRICS

Trend analysis of certain performance metrics allows for a more accurate assessment of developments in a transaction’s credit profile. While reporting requirements and data availability may vary between issuers, DBRS endeavours to monitor performance metrics such as charge-off rates, arrearage rates, credit enhancement and excess spread levels, payment rates, yield and purchase rates. Trends in these metrics along with event driven metrics such as transaction triggers and counterparty ratings are reviewed to develop a more comprehensive picture of a transaction’s performance.

#### *Charge-Offs / Arrears*

Charge-offs are loans written off as uncollectible by the issuing entity, net of recoveries. Increased charge-off activity is typically the result of macroeconomic conditions, but may also be a sign of problems in the servicing of the accounts.

Arrearage rates are early indicators of deterioration or improvement in portfolio performance, though seasonal variations must be taken into account when analysing changes. Increasing rates of seriously delinquent accounts can signal future stress on a transaction resulting from weakening macroeconomic conditions or other changes in cardholder behaviour brought on by exogenous events.

DBRS monitors charge-off rates on a gross (i.e. before recovery) and net basis using monthly changes in activity as well as three month and six month moving averages. Levels of cumulative charge-offs are monitored and compared with the expectations and stresses used in deriving the transaction’s original rating. Delinquency rates are monitored using monthly changes in activity as well as changes over three month and six month periods.

#### *Credit Enhancement / Excess Spread*

Credit enhancement typically is in the form of subordination, over-collateralisation, cash collateral accounts and excess spread (or some combination of these). Credit enhancement is monitored both in terms of the level required by transaction documentation as well as its sufficiency to cover projected losses with respect to the multiple ranges employed by DBRS when rating the transaction.



Gross excess spread is the difference between the yield on the asset pool and the cost of funding the securities (including administration fees such as servicing, etc). Excess spread absorbs losses each month, usually before other forms or credit enhancement are used. After losses have been absorbed, the amount of excess spread available, if any, is termed “net excess spread”, and may be used to replenish credit enhancement that has been reduced from losses in prior months. If not used to replenish credit enhancement, it may be released from the deal, and will not be subject to recapture. DBRS monitors trends in excess spread by examining monthly changes as well as three month and six month moving averages.

### *Payment Rate*

Payment rate is calculated by dividing the total monthly collections received by the beginning period receivables balance. It is an important metric in that it determines the length of time needed to repay noteholders during either controlled accumulation or early amortisation periods. In the case of an early amortisation, a low payment rate will result in noteholders being exposed to risk for a longer period of time.

Payment rates are a function of the percentage of “convenience” users (i.e. borrowers who pay their full balance each billing cycle) in the pool as well as of delinquencies and charge-offs. A declining trend in a payment rate that is not attributable to seasonal fluctuations may be a sign of a change in payment policy by the issuer, or in payment behaviour by obligors. This trend may be a sign of a weakening obligor base that may result in increased delinquency and default activity.

Trends in payment rate are monitored using changes in monthly as well as in three month and six month moving averages. These rates are compared to expectations and stress cases used in the transaction’s original rating analysis.

### *Yield*

The yield on a credit card portfolio is comprised of interest charges, annual fees, late payment fees, over-limit fees, and interchange. Occasionally, recoveries from charged-off accounts are included, depending on the transaction’s governing documents. DBRS tracks the individual components of yield separately to the extent data is available. This allows DBRS to assess trends at a more detailed level, and make more precise adjustments to yield in cash flow modelling.

Credit cards have interest rates that are based on a fixed or floating rate, plus a spread or “premium”. As the premium is based on the credit quality of the obligor, portfolios of lower credit quality accounts typically have higher yields than portfolios with accounts comprised of obligors with stronger credit profiles. The portfolio’s composition with respect to “convenience” users and “revolvers” also have an impact on yield as “convenience” users do not generate interest income for the portfolio, only interchange and potentially, annual fee income.

DBRS monitors trends in yield by observing changes in monthly as well as three month and six month moving average behaviours. Exogenous factors such as regulatory changes are also monitored for their effect on credit card yield.

### *Purchase Rate*

Purchase rate is the speed at which new receivables are created to offset the repayment or charge-off of older receivables. A trust’s pool balance will increase to the extent that the purchase rate exceeds the combined payment and charge-off rates, and decline when the opposite occurs.

DBRS monitors purchase rate activity using monthly changes as well as three month and six month moving averages to compare a transaction’s actual performance with the expectations and stresses used in rating the transaction.



### ***Ratings and Financial Condition of Key Entities***

The insolvency of a sponsor may result in servicing disruptions and, potentially, changes in cardholder behaviour that may significantly change the credit profile of a portfolio. As a result, DBRS incorporates a financial review of relevant parties in its periodic evaluation of a transaction. This entails a review of the company's DBRS credit rating or internal assessment in relation to rating thresholds or triggers as well as pertinent financial news. For swap counterparties DBRS also monitors the mark-to market value. If a swap counterparty has been downgraded below the First or Second Rating Threshold (as discussed in Swap Criteria for European Structured Finance Transactions), DBRS requests and reviews a valuation of the swap and the collateral (pursuant to the applicable credit support documentation), and, where relevant, efforts made by the swap counterparty to facilitate its replacement.

### ***Sovereign Risk***

Sovereign risk can manifest itself in securitisations in a variety of forms- from the effect the overall economy of the region has on loan repayment behaviour of borrowers to downgrades of key transaction counterparties that may be owned, partially owned, or implicitly supported by the state. Sovereign risks in a transaction are monitored through a combination of reviewing DBRS public rating or internal assessment of the sovereign entity as well as keeping abreast of news that affects the sovereign's financial stability.

### ***Triggers***

Events related to asset pool performance or events involving the program sponsor may trigger an early amortisation of a transaction. These early amortisation trigger events typically include a decline of payment rates or excess spread below a prescribed level, an insolvency of key parties to the transaction, failure of a sponsor to maintain its pro-rata interest in the receivables pool (sometimes referred to as the "seller's interest"), or a breach in the performance of the sponsor with regard to representations or warranties it has made in the transaction's documents. DBRS tracks compliance with these triggers in each of its periodic reviews, and to the extent data is available, recalculates certain performance metrics to ensure compliance.

## **STRESS TESTING**

If the periodic review or exogenous events indicate a rating change may be in order, a more comprehensive analysis is performed to determine if a rating committee is necessary; in any event, each rating is reviewed by a rating committee at least once per year. Generally, the standard stresses used by DBRS in rating a transaction are used in the evaluation but applied to actual pool and manufacturer concentrations. Levels of stress may be modified when extraordinary events indicate such change is prudent.

### ***Note:***

Further information about DBRS rating methodology for credit card securitisations can be found in the following publications available on the DBRS website:

- “Rating European Consumer and Commercial Asset-Backed Securitizations”
- “Legal Criteria for European Structured Finance Transactions and Addenda”
- “Unified Interest Rate Model for European Securitizations”
- “Swap Criteria for European Structured Finance Transactions”

---

## Small and Medium Enterprise Loans

---

The purpose of this section is to set forth the surveillance methodology and process DBRS utilises for small and medium enterprise (SME) loans. Included is a discussion of the analysis process and the key credit factors DBRS examines.

### OVERVIEW

The assets in SME collateralized loan obligations (CLOs) are long- and short-term loans extended to micro, small, and medium sized businesses. SMEs are typically businesses which employ fewer than 250 people and which have an annual turnover not exceeding approximately €50 million Euros. SMEs can also include loans to self-employed individuals. SME loans can either be secured or unsecured. SME CLO portfolios could include loans to larger corporations, as well as self-employed individuals, and can be either revolving or static pools.

The data monitored by DBRS reflects both the inherent performance characteristics of the collateral and the structure of the deal.

### PERFORMANCE METRICS

Trend analysis of certain performance metrics allows for a more accurate assessment of developments in a transaction's credit profile. While reporting requirements and data availability may vary between issuers and jurisdictions, DBRS monitors the following performance metrics to develop a more comprehensive picture of a transaction's performance. One of the key performance vectors evaluated is that for expected lifetime pool defaults. Expected defaults are measured against available credit enhancement to determine if the transaction is still within acceptable loss coverage ratios for its current rating. Additional metrics include:

#### *Default & Loss Rates*

Net losses are a function of default frequency and severity upon disposition of the asset. Actual defaults and losses are tracked. Developing trends, in either component, that are projected to place performance outside of DBRS original expectations may result in a re-evaluation of a deal's current rating.

#### *Delinquencies*

Delinquent loans are a signal of potential future defaults and losses. Developing trends in delinquencies are tracked and compared with default expectations. Delinquency rates that imply performance outside of DBRS original expectations may result in a re-evaluation of a deal's current rating.

#### *Credit Enhancement / Excess Spread*

Credit enhancement may come in the form of subordination, over-collateralisation, reserve accounts and excess spread (or a combination of these). Credit enhancement is monitored both in terms of the level required by transaction documentation and its sufficiency to cover losses projected by DBRS.

DBRS monitors trends in gross and net excess spread as well as yield. Gross excess spread is the difference between the yield on the asset pool and the cost of funding the securities (including administration fees such as servicing, etc). Excess spread absorbs losses each month, before other forms of credit enhancement are drawn upon. After losses have been absorbed, the amount of excess spread available, if any, is "net excess spread", and is typically used to replenish credit enhancement that has been reduced from losses in prior months. If net excess spread is not needed to replenish credit enhancement it may be released from the deal. Once released, it cannot be recaptured. If a swap has been incorporated into the transaction to mitigate interest rate risk, and effectively ensure a certain level of excess spread, DBRS monitors the financial strength of the swap provider as well as the mark-to-market of the swap and any attendant triggers.



### ***Ratings and Financial Condition of Key Entities***

The financial condition of counterparties is important to the structure of deals. Not only can the insolvency of a servicer create issues with respect to collections and other servicing functions, but it may also create funds commingling issues that could affect timely remittances to investors. DBRS incorporates a financial review of relevant parties in its periodic evaluation of a transaction. This entails a review of the company's DBRS credit rating or internal assessment in relation to rating thresholds or triggers as well as pertinent financial news. For swap counterparties DBRS also monitors the mark-to-market value. If a swap counterparty has been downgraded below the First or Second Rating Threshold (as discussed in Swap Criteria for European Structured Finance Transactions), DBRS requests and reviews a valuation of the swap and the collateral (pursuant to the applicable credit support documentation), and, where relevant, efforts made by the swap counterparty to facilitate its replacement. DBRS monitors the mark-to-market of the swap, regardless of the credit quality of the counterparty, to determine whether the market value of the swaps would affect replacement in the event of a downgrade of the swap counterparty.

### ***Sovereign Risk***

Sovereign risk can manifest itself in securitisations in a variety of forms- from the effect the overall economy of the region has on loan repayment behaviour of borrowers to downgrades of key transaction counterparties that may be owned, partially owned, or implicitly supported by the state. Sovereign risks in a transaction are monitored through a combination of reviewing DBRS public rating or internal assessment of the sovereign entity as well as keeping abreast of news that affects the sovereign's financial stability.

### ***Foreign exchange***

When multiple currencies exist in the asset pool, the liability structure of the CLO may be structured to have a natural 'hedge' by issuing tranches in each currency of the pool. If DBRS is cognizant of any material FX risks, an appropriate set of scenarios that define FX volatility and default biasing between currency buckets will be identified.

### ***Pool composition***

SME CLO pools can be either static or revolving. In either case, pool composition is monitored based on changes to borrower concentration, industry concentration, regional concentrations, weighted average spread, weighted average life, asset type, loan security type, and other concentration limits. Changes to pool composition, as a result of either portfolio amortization or replenishment, that are projected to place performance or diversity outside of DBRS original expectations may result in re-evaluation of the deal's current rating.

### ***Triggers***

Triggers are defined in the governing legal documents for each transaction. Triggers often relate to pool performance or changes in ratings for transaction participants. Breaches of triggers may necessitate changes such as increases in credit enhancement or replacement of transaction parties such as the servicer. These triggers are typically tied to pool loss and delinquency rates, but can also be tied to certain concentration limits. DBRS tracks compliance with these triggers in each of its periodic reviews and may re-calculate certain performance metrics to assist in the evaluation.

## **STRESS TESTING**

If the periodic review or exogenous events indicate a rating change may be in order, a more comprehensive analysis is performed to determine if a rating committee is necessary; in any event, each rating is reviewed by a rating committee at least once per year. DBRS utilises its standard stresses in its analysis but applies them to historical performance.

Expected lifetime portfolio default rates are based upon the output of the SME Large Pool Model. Recoveries, recovery timing, correlation, and timing of defaults are generated in accordance with the DBRS methodologies used in rating the transaction, but may be adjusted for exogenous factors.



**Note:**

Further information about DBRS rating methodology for SME CLOs can be found in the following methodologies available on the DBRS website.

- “Master European Granular Corporate Securitisations (SME CLOs)”
- “Legal Criteria for European Structured Finance Transactions and Addenda”
- “Unified Interest Rate Model for European Securitisations”
- “Swap Criteria for European Structured Finance Transactions”

Copyright © 2011, DBRS Limited, DBRS, Inc. and DBRS Ratings Limited (collectively, DBRS). All rights reserved. The information upon which DBRS ratings and reports are based is obtained by DBRS from sources DBRS believes to be accurate and reliable. DBRS does not audit the information it receives in connection with the rating process, and it does not and cannot independently verify that information in every instance. The extent of any factual investigation or independent verification depends on facts and circumstances. DBRS ratings, reports and any other information provided by DBRS are provided "as is" and without representation or warranty of any kind. DBRS hereby disclaims any representation or warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability, fitness for any particular purpose or non-infringement of any of such information. In no event shall DBRS or its directors, officers, employees, independent contractors, agents and representatives (collectively, DBRS Representatives) be liable (1) for any inaccuracy, delay, loss of data, interruption in service, error or omission or for any damages resulting therefrom, or (2) for any direct, indirect, incidental, special, compensatory or consequential damages arising from any use of ratings and rating reports or arising from any error (negligent or otherwise) or other circumstance or contingency within or outside the control of DBRS or any DBRS Representative, in connection with or related to obtaining, collecting, compiling, analyzing, interpreting, communicating, publishing or delivering any such information. Ratings and other opinions issued by DBRS are, and must be construed solely as, statements of opinion and not statements of fact as to credit worthiness or recommendations to purchase, sell or hold any securities. A report providing a DBRS rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. DBRS receives compensation for its rating activities from issuers, insurers, guarantors and/or underwriters of debt securities for assigning ratings and from subscribers to its website. DBRS is not responsible for the content or operation of third party websites accessed through hypertext or other computer links and DBRS shall have no liability to any person or entity for the use of such third party websites. This publication may not be reproduced, retransmitted or distributed in any form without the prior written consent of DBRS. ALL DBRS RATINGS ARE SUBJECT TO DISCLAIMERS AND CERTAIN LIMITATIONS. PLEASE READ THESE DISCLAIMERS AND LIMITATIONS AT <http://www.dbrs.com/about/disclaimer>. ADDITIONAL INFORMATION REGARDING DBRS RATINGS, INCLUDING DEFINITIONS, POLICIES AND METHODOLOGIES, ARE AVAILABLE ON <http://www.dbrs.com>.



*Insight beyond the rating.*

[www.dbrs.com](http://www.dbrs.com)

---

**DBRS Ratings Limited**  
25 Copthall Avenue  
London, EC2R 7BP  
United Kingdom  
+44 (0)20 3137 9511